

Appl. S.N.: 10/629,146
Amdt. Dated: February 6, 2006
Reply to Office Action of November 6, 2006

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REMARKS/ARGUMENTS

This amendment is responsive to the Office Action mailed November 6, 2006 wherein claims 1-25 and 30-32 were rejected. Claims 1-2, 6-7, 10, 13-14, 18, and 21 have been amended, claims 9, 12, 24 and 32-34 have been canceled without prejudice and claims 35-50 have been added. Claims 1-8, 10-11, 13-23, 25-31 and 35-50 are currently pending.

Specification and claim amendments

Applicants have amended the specification and claims to improve clarity. Applicants submit that no new matter has been added.

Claim rejections under 35 USC §103(a)

Claims 1, 3-4 and 6-12 were rejected under 35 USC §103(a) as being unpatentable over Berndt et al. (US 6,063,135). Claims 9 and 12 have been cancelled, thereby rendering the rejections to these claims as moot. Applicants respectfully traverse the rejection to claims 1, 3-4 and 6-8 as being unpatentable over Berndt.

When viewed as a whole, Applicants' invention is directed towards an apparatus and method for removing contaminants from a dry cleaning solvent, where the apparatus is designed for home or coin-op use. In order to meet the space and energy consumption requirements of an appliance designed for such end uses, Applicants' apparatus and method do not use a distillation process for purification and reclamation of the solvent (see e.g., paragraph [0004]). However, prior art dry cleaning systems (as e.g., disclosed in Berndt) utilize distillation processes to purify dry cleaning solvents and separate water from the solvent. Prior to Applicants' invention, such distillation processes were required in order to prevent biofouling of the cleaning apparatus. In contrast, by using an ultrafiltration filter having a sub-micron pore size, Applicants' cleaning apparatus and method is capable of removing bacteria and viruses through filtration without the use of a distillation process. Furthermore, by using a mechanical filter and/or

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a particulate filter having a relatively larger pore size in combination with the ultrafiltration filter, larger contaminants can be prevented from clogging the ultrafiltration filter.

Applicants' claim 1 as amended herein is directed to an article cleaning apparatus and for illustrative purposes is reproduced in part below:

An article cleaning apparatus for cleaning articles using a solvent based cleaning fluid and for cleaning the solvent based cleaning fluid without using distillation, the apparatus comprising:

a controller configured to clean the articles in the cleaning basket assembly using the solvent based cleaning fluid and to clean the solvent based cleaning fluid using the ultrafiltration filter to remove bacteria from the solvent based cleaning fluid without using distillation on the solvent based cleaning fluid.

The Office Action concedes that "the Berndt reference teaches a distillation process." Thus, Berndt fails to teach or suggest cleaning the solvent based cleaning fluid without using distillation.

Additionally, Applicants' claim 3 recites that the "ultrafiltration filter is operable to only allow materials having a molecular weight of less than about 100,000 daltons to pass through", while claim 7 recites that the "fluid processing mechanism further comprises a particulate filter in communication with said cleaning basket assembly and said ultrafiltration filter."

The Office Action states that Berndt discloses, "that any type of cartridge, discs, flex-tubular or rigid-tubular filtration system may be used either individually or in combination (col. 8, lines 36-38)" and that "this reads on applicants' claims

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for ultrafiltration filters, singular cartridge filters and combinational cartridge filters." Applicants respectfully disagree with the position that Berndt's mere statement that "any type of cartridge, discs, flex-tubular or rigid-tubular filtration system may be used either individually or in combination" would read on Applicants' ultrafiltration filter as claimed. Applicants' claim 1 clearly recites an ultrafiltration filter having a pore size of about 0.01 microns to about 0.2 microns.

Although the Office Action concedes that the specific mesh size, pore size or operability relative to molecular weight for the ultrafiltration, particulate or mechanical filters is not taught by Berndt, the Action further states that it would have been obvious "to optimize the mesh size, pore size and/or passable molecular weight for said filter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (*citing In re Boesch*)."

Applicants submit that it would not have been obvious to optimize the mesh size, pore size and/or passable molecular weight for the filter(s) disclosed in Berndt. In contrast to Applicants' claimed invention, Berndt teaches a dry cleaning method and apparatus that utilizes a distillation process. For example (beginning at column 9, line 21), Berndt states that at "*Step 7 the contaminated siloxane solvent is reprocessed and purified through vacuum distillation... Heat is generated through steam energized coils in contact with the chamber in the range of 230 to 300 degrees Fahrenheit.*" Further, Berndt states "*Vacuum distilling the contaminated cyclic siloxane solvent(s) eliminates the low boiling point contaminants, including residual water, as well as the high boiling point contaminants.*" Thus, since Berndt utilizes a distillation process that already removes contaminants, there would be no motivation or suggestion to modify Berndt's existing particulate filter(s) by decreasing pore sizes, especially since decreased pore sizes typically result in decreased flow rate.

Accordingly, for at least the reasons set forth above, Applicants submit that claim 1 is allowable over Berndt. Furthermore, due at least to their

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dependency on claim 1, Applicants submit that claims 3-4, 6-8 and 10-11 are similarly allowable. As such, Applicants respectfully request that the rejections to claims 1, 3-4, 6-8 and 10-11 be removed and the claims be allowed.

Claim 2 was rejected under 35 USC §103(a) as being unpatentable over Berndt and further in view of Dayton (US 4,793,938). Dayton is cited for teaching a flushing device. Although Dayton may teach a flushing device, Dayton nonetheless does not cure the deficiencies of Berndt as applied to claim 1. More specifically, Dayton does not teach or fairly suggest cleaning a solvent based cleaning fluid using an ultrafiltration filter having a pore size of about 0.01 microns to about 0.2 microns without using distillation, nor the use of a flushing device to flush such an ultrafiltration filter. Accordingly, Applicants request that the rejection to claim 2 be removed and the claim be allowed.

Claim 5 was rejected under 35 USC §103(a) as being unpatentable over Berndt as applied to claim 4 and further in view of Rasmussen (US 6,857,162). Rasmussen is cited for teaching a membrane filter as recited in claim 5. Although Rasmussen may teach a membrane filter, Rasmussen nonetheless does not cure the deficiencies of Berndt as applied to claims 4 and 1. That is, Rasmussen does not teach or fairly suggest cleaning a solvent based cleaning fluid using an ultrafiltration membrane filter having a pore size of about 0.01 microns to about 0.2 microns without using distillation. Accordingly, Applicants request that the rejection to claim 5 be removed and the claim be allowed.

Claim 13-16, 18-25 and 30-32 were rejected under 35 USC §103(a) as being unpatentable over Berndt in view of Dayton. Claims 24 and 32 have been canceled, thereby rendering the rejection to these claims moot. Applicants' independent claim 13 is similar in form to Applicants' independent claim 1. Thus for at least the reasons set forth above with respect to claims 1-8 and 10-11, Applicants further submit that claims 13-16, 18-23, 25 and 30-31 are allowable and request that the rejections to these claims be removed.

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Claim 17 was rejected under 35 USC §103(a) as being unpatentable over Berndt and Dayton as in claim 16, and further in view of Rasmussen applied for the same reasons as given for claim 5. Applicants submit that due at least in part to its dependency on claims 16 and 13, claim 17 is likewise allowable for at least the reasons set forth above. As such, Applicants request that the rejection to claim 17 be removed and the claim be allowed.


New Claims

Independent claim 35 is allowable for at least the same reasons as claims 1 and 13. Claims 36-50 depend directly or indirectly from claim 35. Applicants submit that these dependent claims are similarly allowable.

In view of the foregoing amendments and for the reasons set out above, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number below.

Respectfully submitted,


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